



Sandia National Laboratories

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Combustion Research Facility
Livermore, CA 94550**



Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
for the United States Department of Energy under contract DE-AC04-94AL85000.



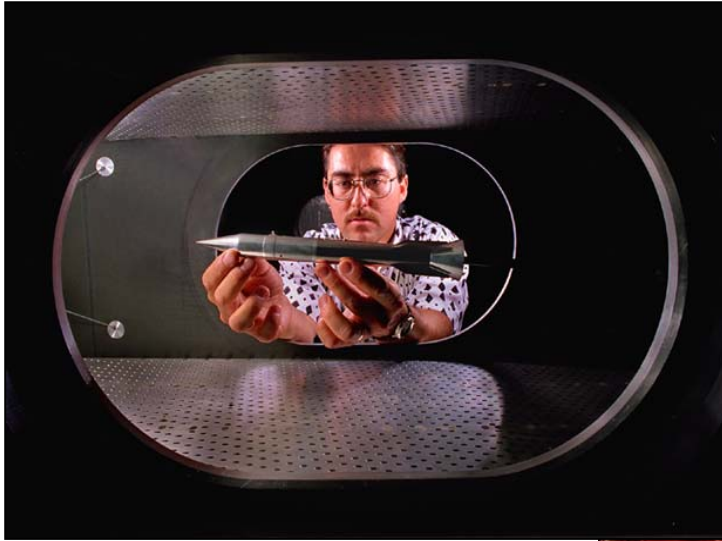


Sandia **VISION**

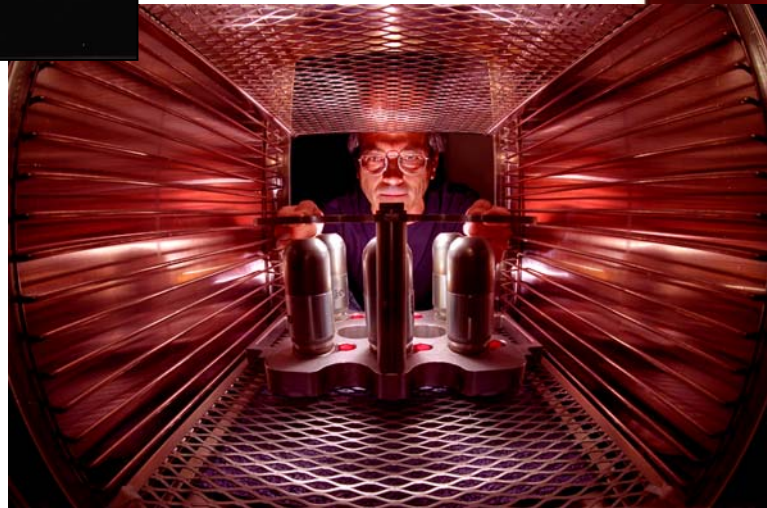


**Helping our nation
secure a peaceful
and free world
through technology.**

Who are we?



- **National security laboratory**
- **Primary mission in nuclear weapons**
- **Broader mission in science and engineering to meet national security needs**





Where are we?



- **Albuquerque, New Mexico**
(7500 employees)
- **Livermore, California**
(900 employees)



- **Nevada**
- **Hawaii**
- **Texas**
- **Washington, D.C.**



Sandia's Core Missions



**Microelectronics
and photonics**

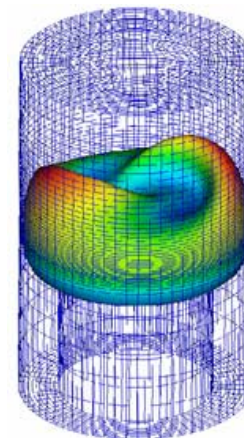
- **Nuclear Weapons**
- **Nonproliferation and Assessments**
- **Energy and Infrastructure Assurance**
- **Military Technologies and Applications**
- **Homeland Security**



**Robotics and intelligent
machines**



MicroChemLab



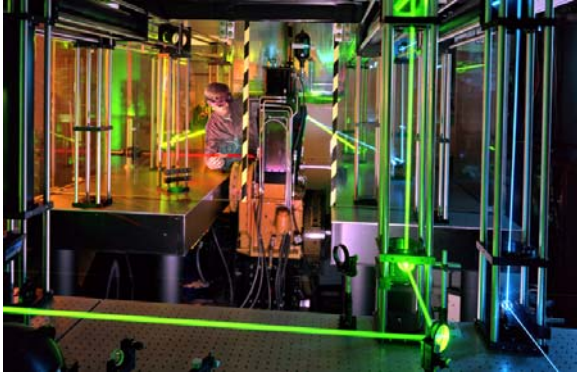
**Simulation
science**



**Sandia
National
Laboratories**



Sandia's User Facilities



Combustion Research Facility



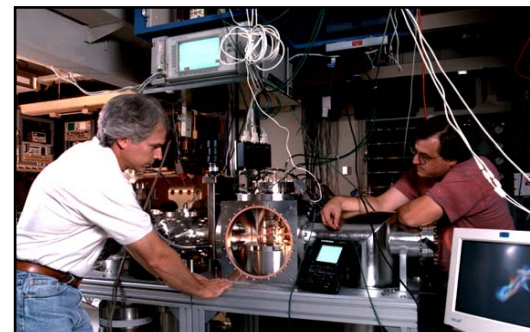
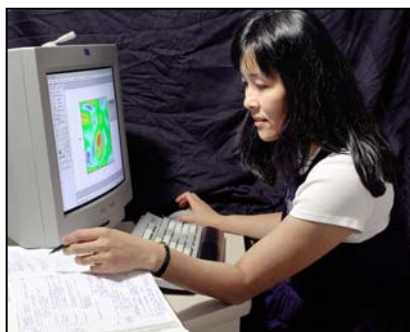
Heliostats at National Solar Thermal Test Facility

- **Combustion Research Facility**
 - **Intelligent Systems and Robotics Center**
 - **Manufacturing Technologies Center**
 - **Materials and Process Diagnostics Facility**
 - **National Solar Thermal Test Facility**
 - **Pulsed Power and Systems Validation Facility**
 - **Radiant Heat Facility**
 - **Shock Technology and Applied Research Facility**
- . . . and many more**

Combustion Research Facility

A DOE user facility dedicated to energy science and technology for the twenty-first century

**~ 100 employees
~ 100 users/year**





CRF Research Focus

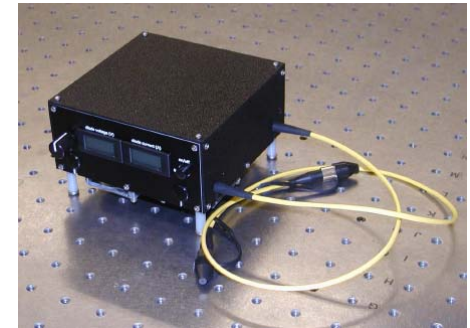
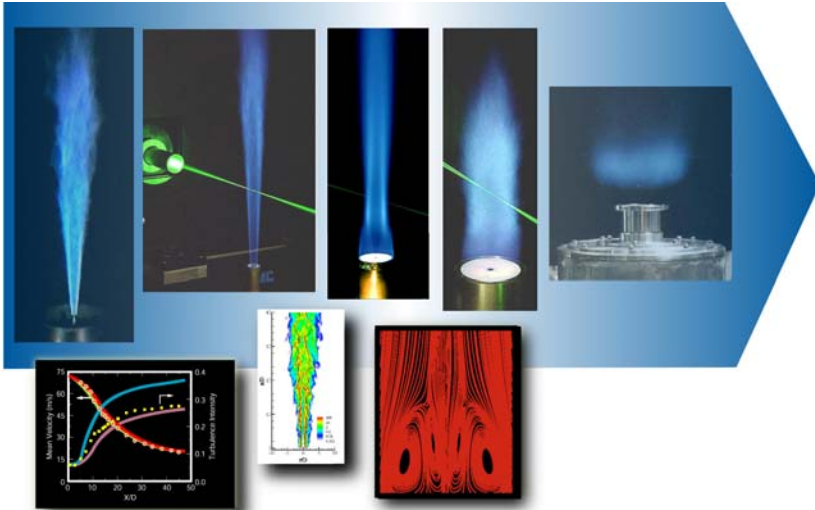
CRF maintains a broad mix of basic and applied research programs

Basic

Combustion Chemistry
Reacting Flow Research

Applied

Engine Combustion
Hydrogen & Combustion Tech.
Remote Sensing & Energetic Mtls



SNL Clean Coal Program

- Speciating Mercury Monitor
- O₂/CO₂ Coal Combustion
 - Char Kinetics
 - NO_x Formation
- Coal Gasification
 - Char Kinetics
 - H₂ Production
- Gas Turbine Combustion (syngas in dilute oxygen)

